



**ALTISCOPE**

# Panel Presentation "Envisioning Urban Air Mobility"

A<sup>3</sup> by Airbus

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# Video

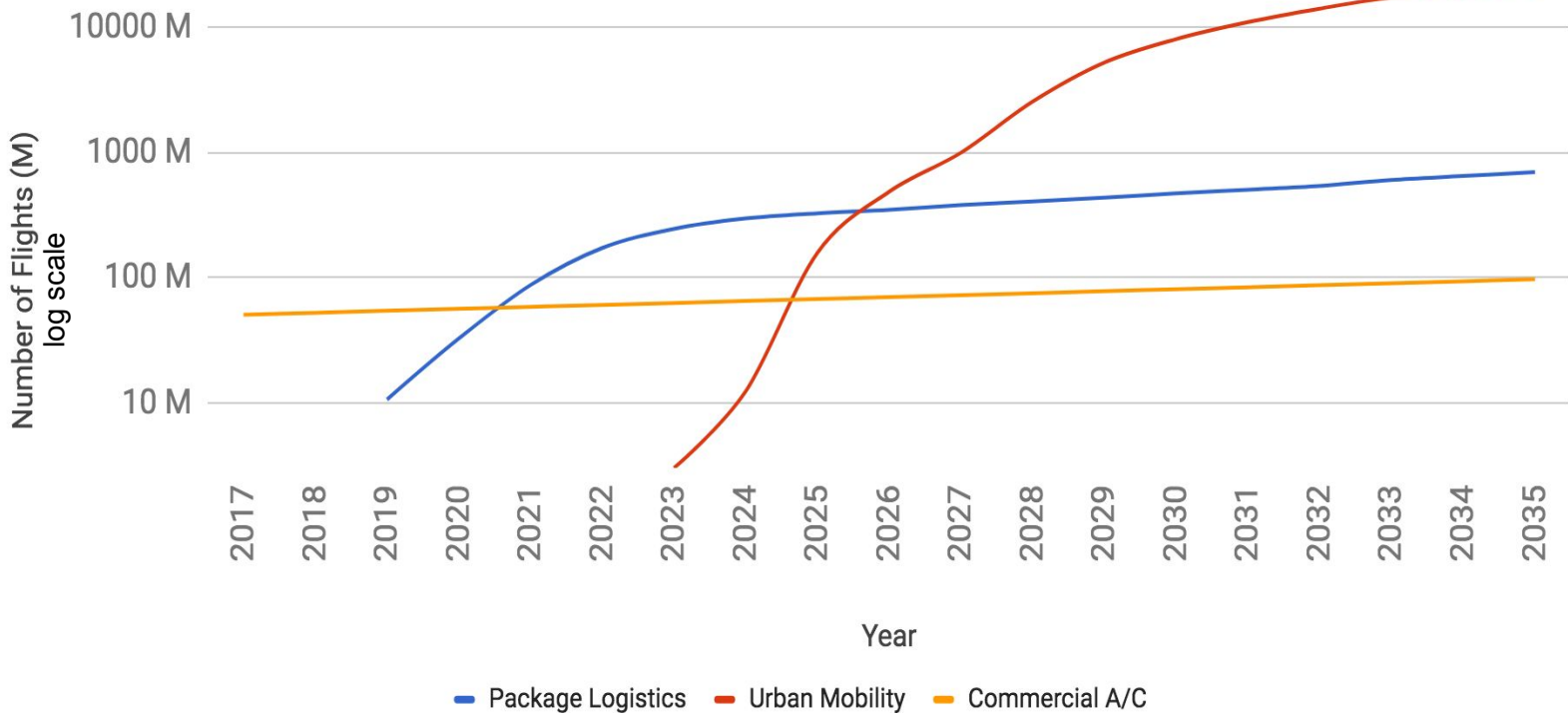


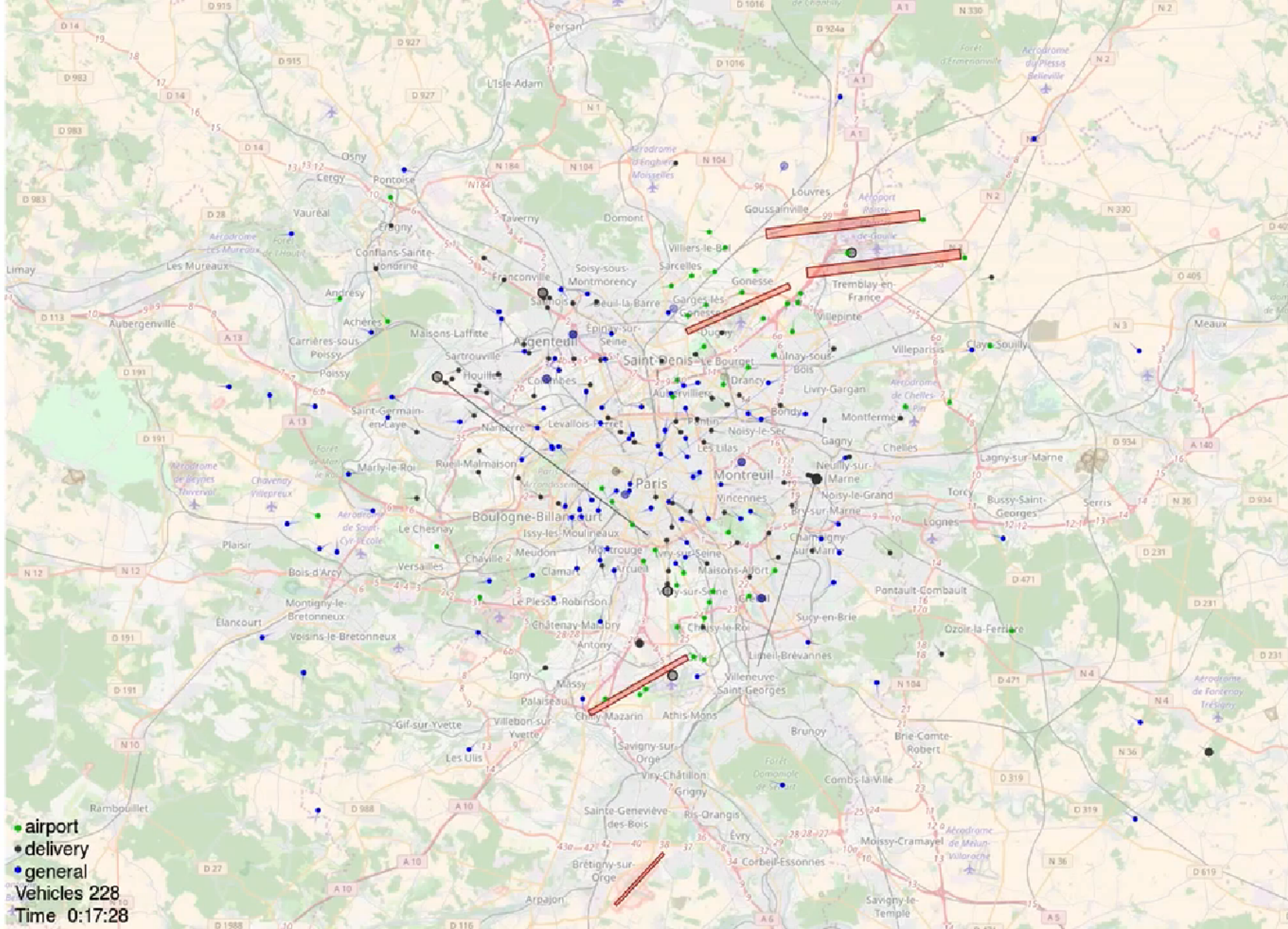
Paris 2030



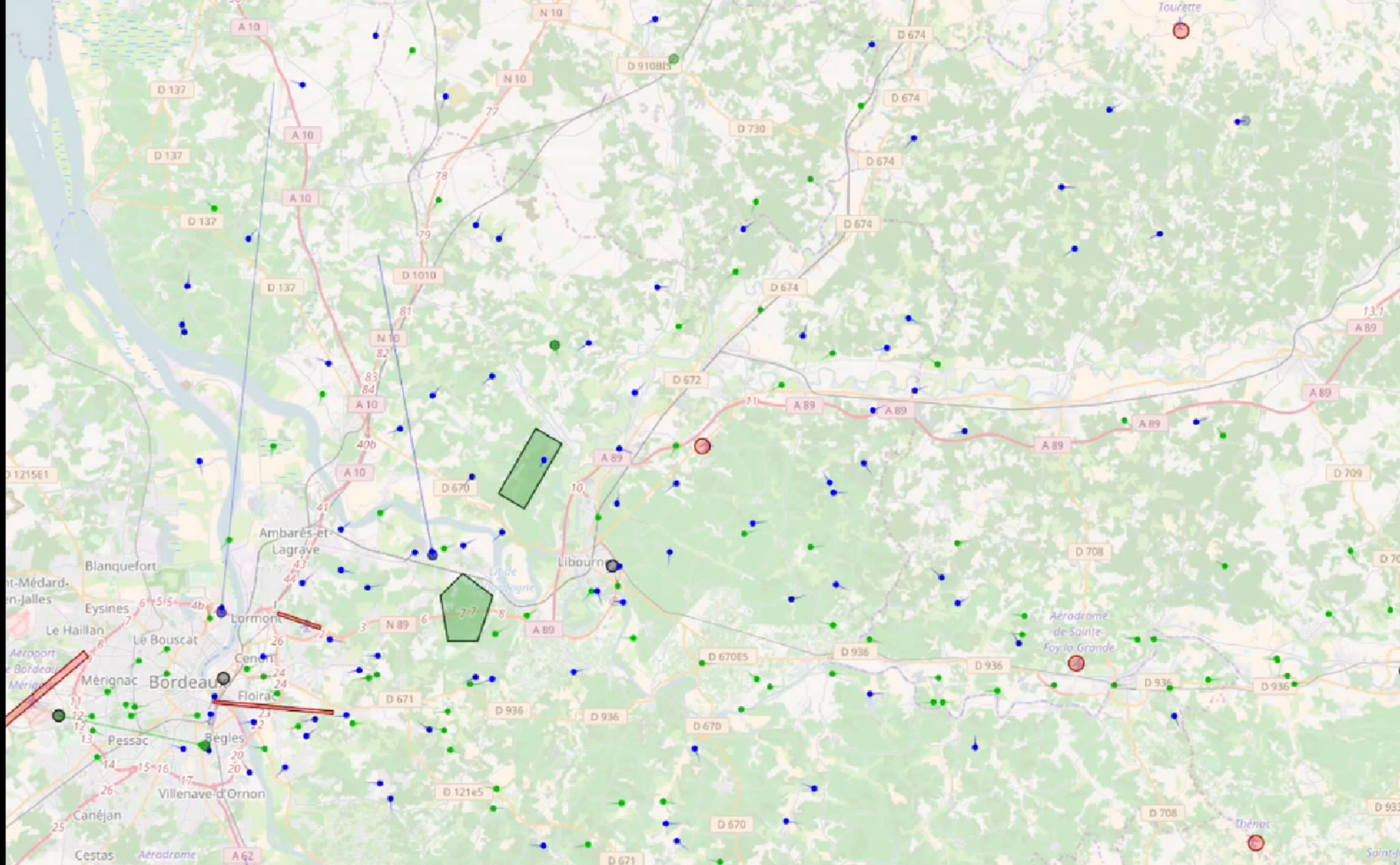
# Increasing traffic in existing and new sectors

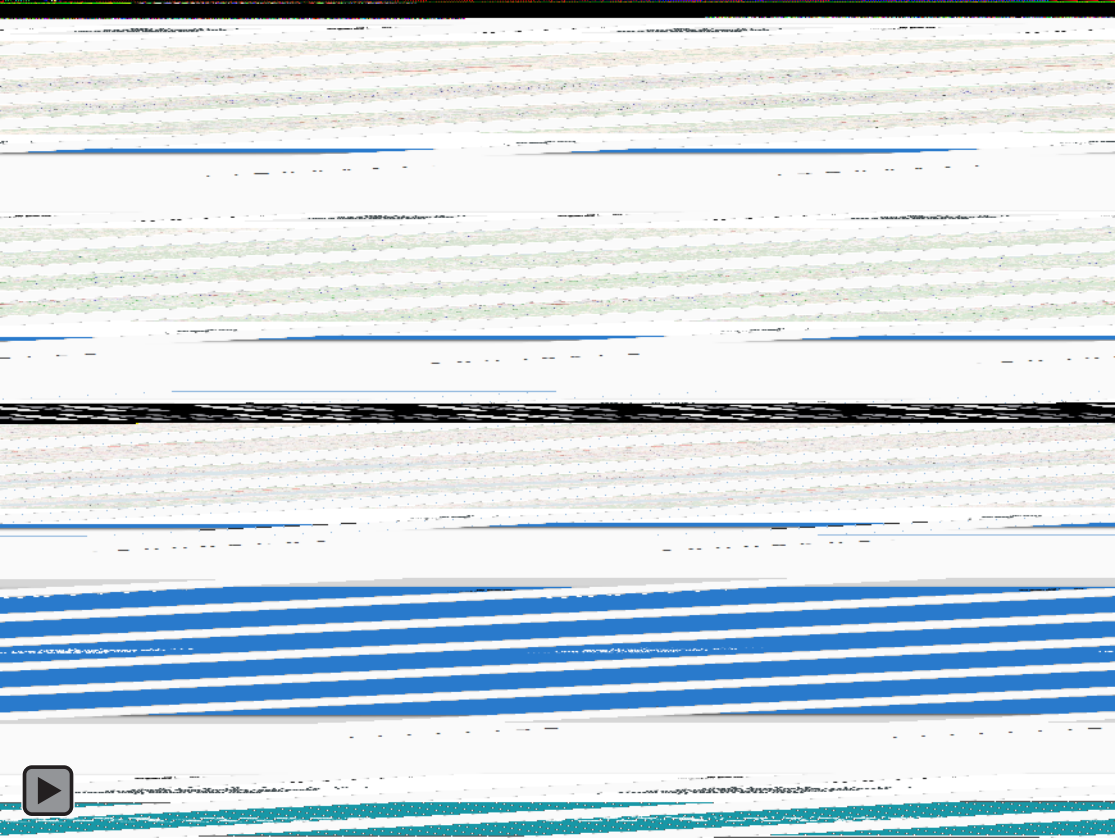
Number of flights per year - commercial a/c, package logistics, and urban mobility





● airport  
● delivery  
● general  
Vehicles 228  
Time 0:17:28







How do we enable this?



# System Must Support Local Needs



Enabling Infrastructure: ATM System, landing pads, communications network, emergency services, etc.

Rules and Policies

Laws, Culture, Physics

# Key Questions for Airspace Design

- Safety
  - How well does the airspace react to unauthorized or bad actors?
  - How crowded is the airspace? Is there traffic, congestion, or clumping?
  - How many emergency landing zones do we need? Where should they be?
- Security
  - How do security requirements affect aircraft cost and capabilities?
- Economics
  - How many aircraft can the airspace handle? How quickly can a flight depart?
  - What happens when an aircraft needs to divert (for any reason)?
  - Are the paths as efficient as possible? How do these paths change with rules?
  - Is the airspace open to the widest possible number of players?

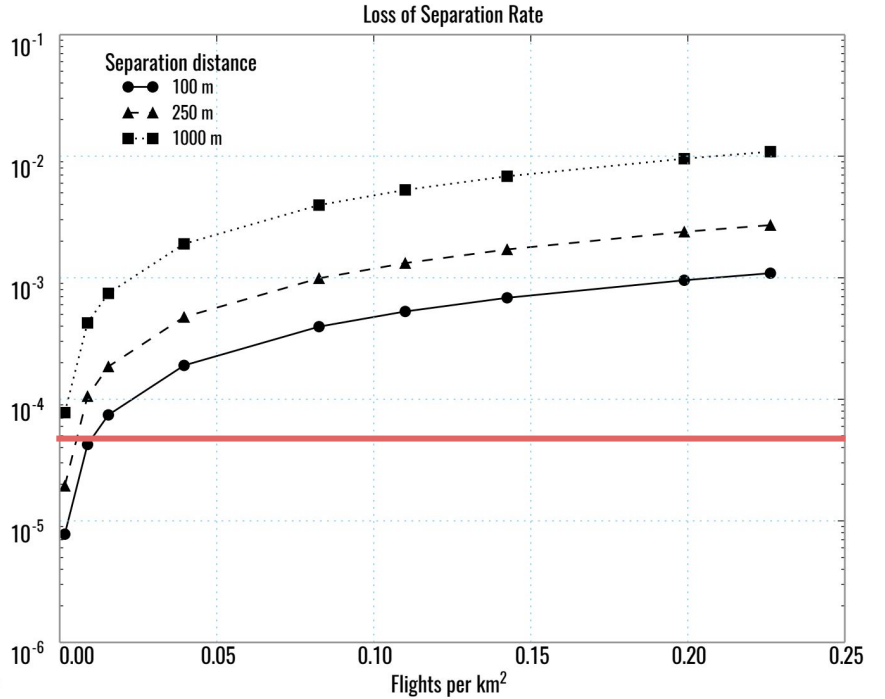
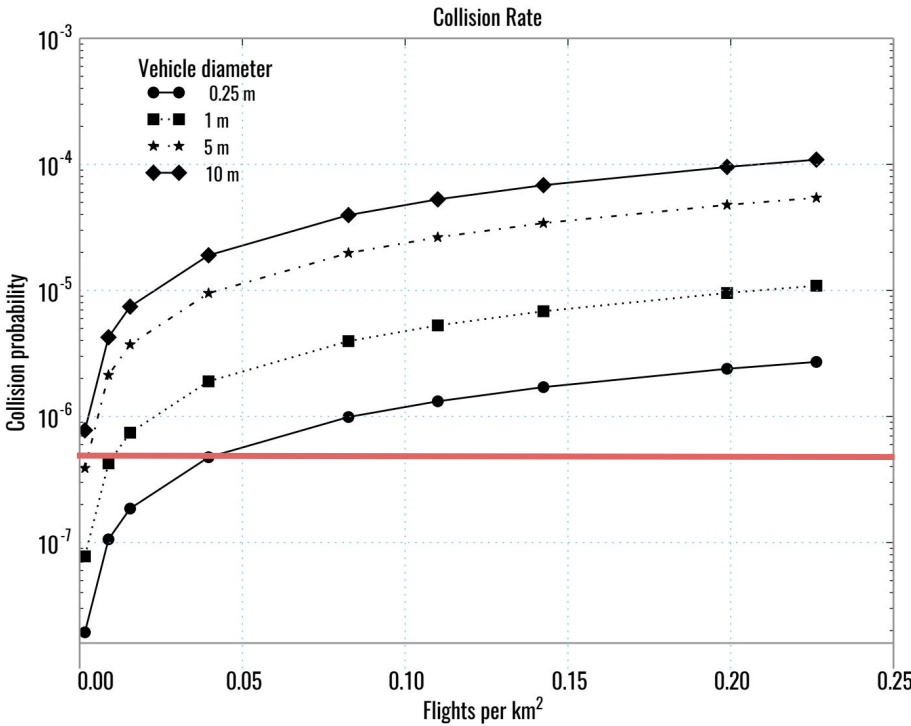
## Example: How close to buildings should aircraft be allowed?





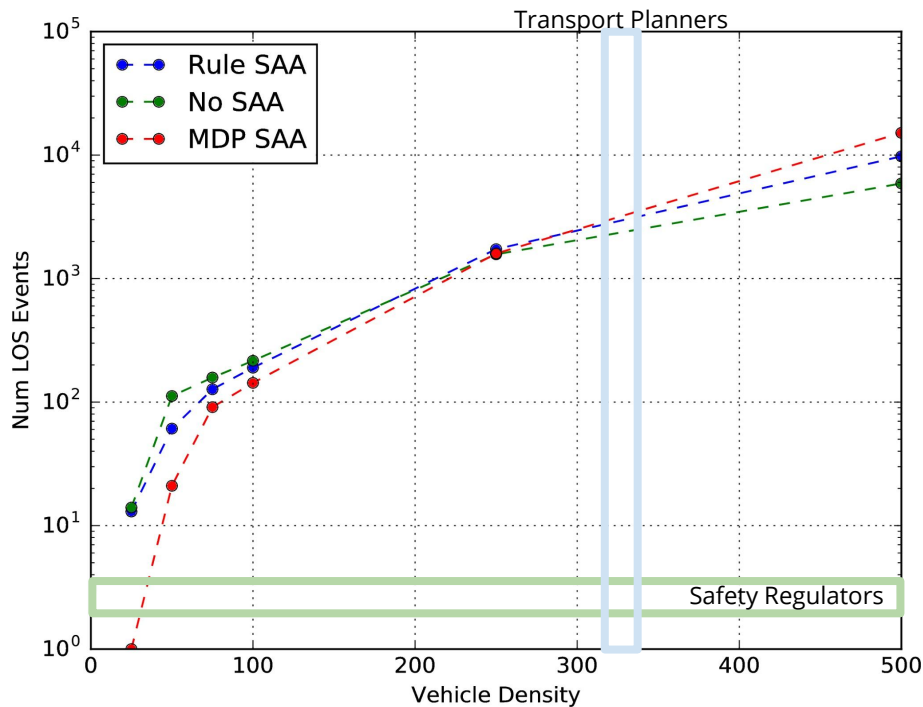
# Example: Separation and Detect/Avoid

# Studies: LOS & Collision Assessment



# Study: DAA

## Regulation and research investment



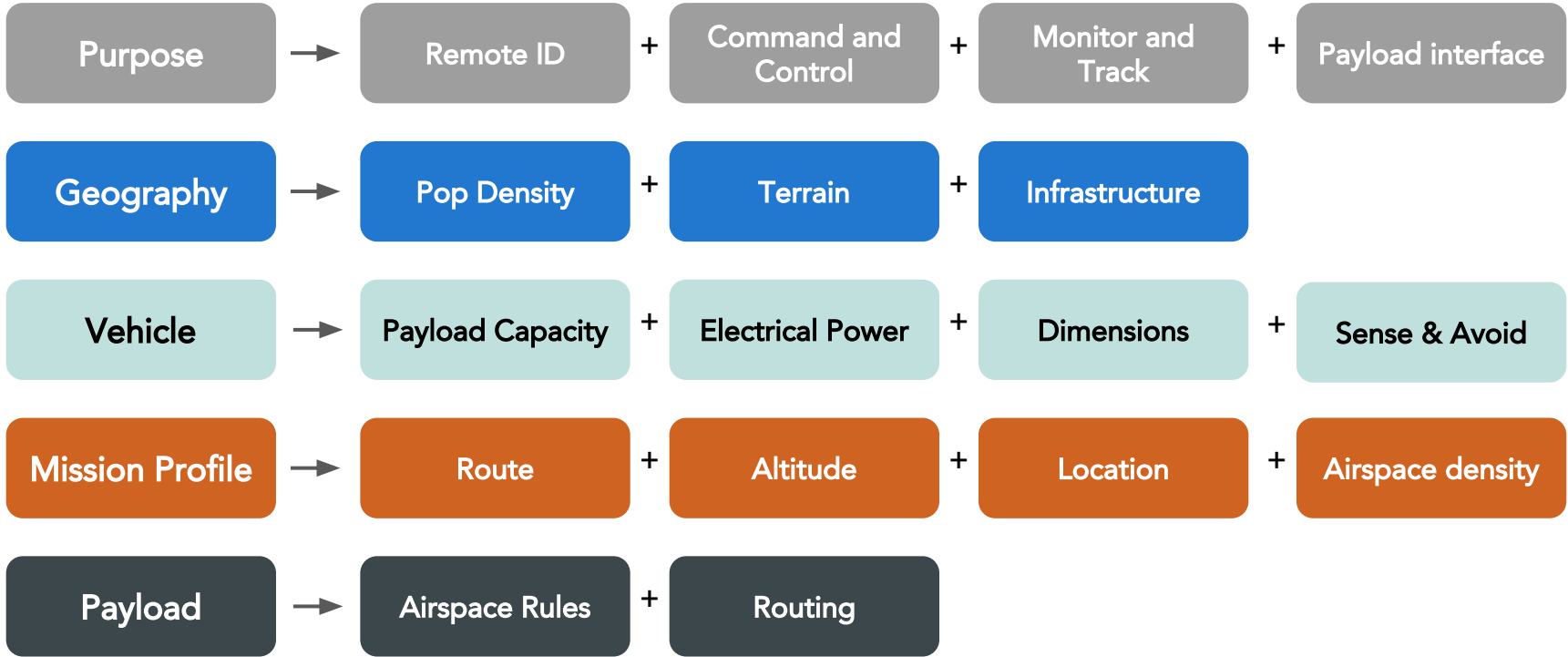
- Work with transport planners to understand expected vehicle densities in different environments
- Work with safety regulators to set acceptable safety thresholds
- Use tool to determine required performance characteristics for DAA → feed to avionics mfgs.
- Use tool to validate proposed solutions in dense airspace scenario



# Example: Communications

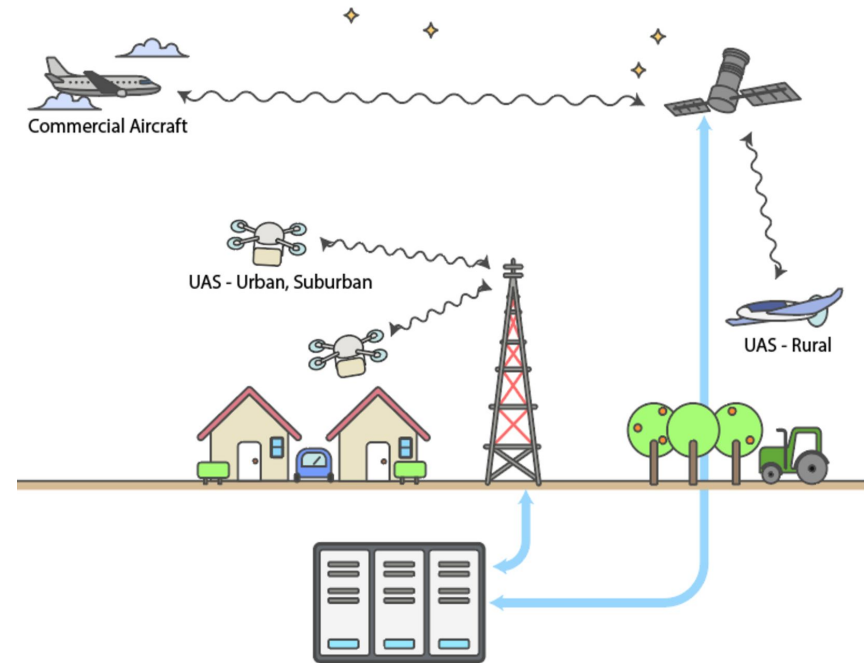


# Communications selection is driven by needs



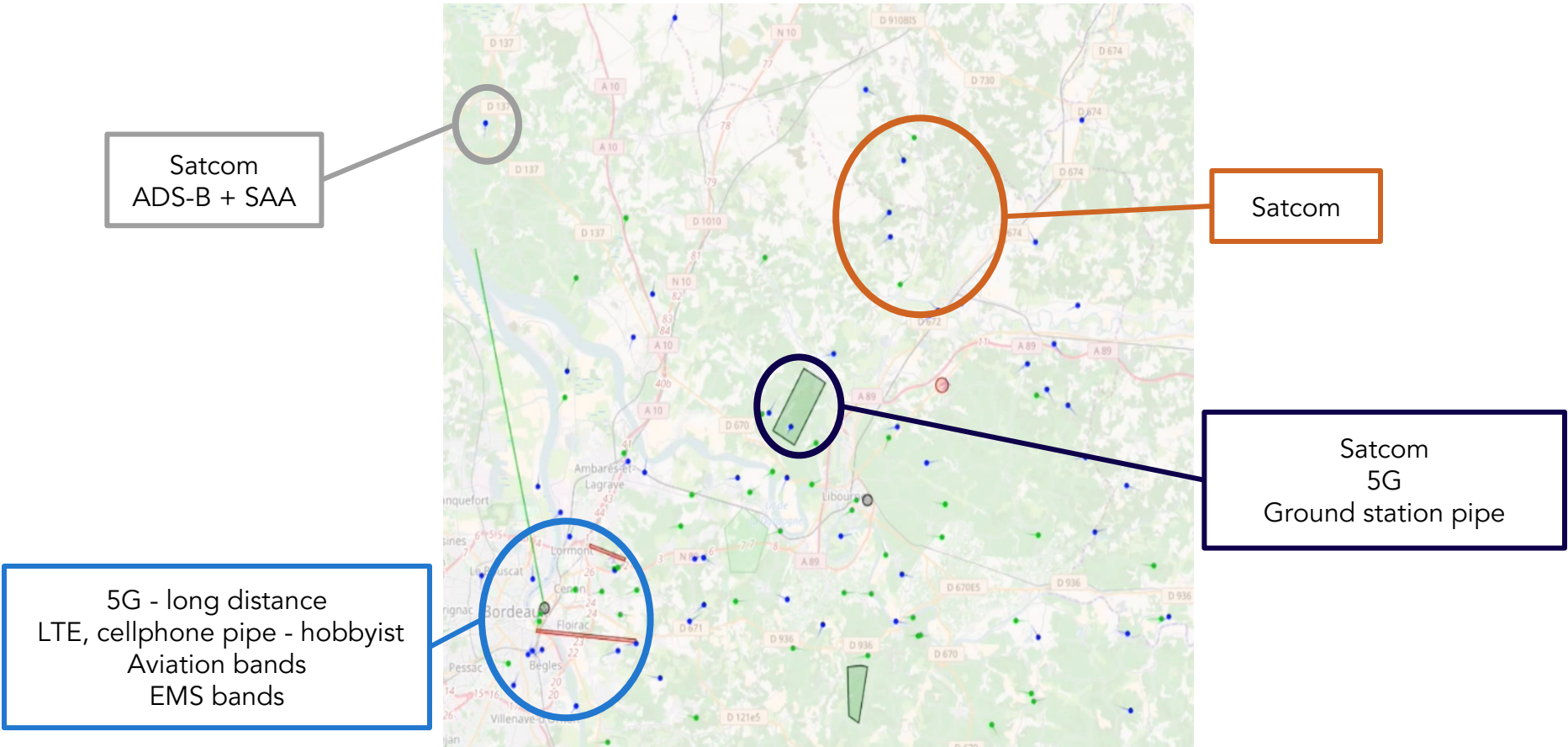


# A variety of architectures must be supported





# Must solve the mixed equippage problem





**ALTISCOPE**

**Enabling** policymakers, operators, service providers, and manufacturers to build fundamental **infrastructure** that will **scale aviation activities** for **decades** to come.



# Thank you!

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